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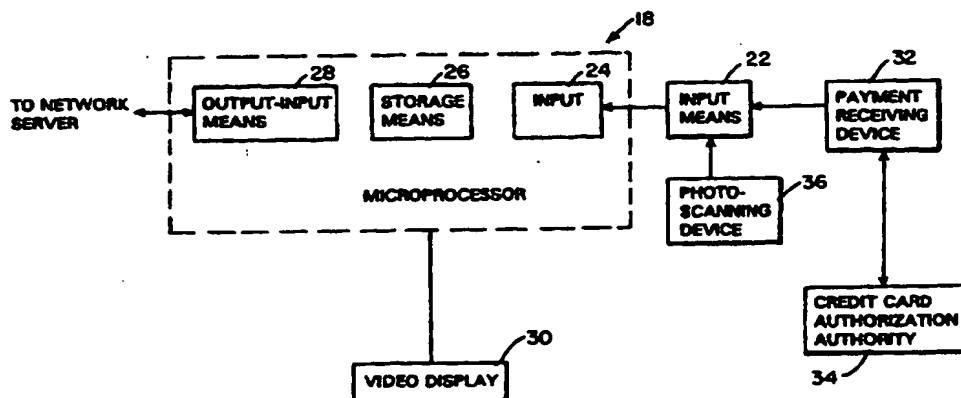
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(54) Title: COMPUTERIZED DATA VENDING SYSTEM



(57) Abstract

The computerized data vending system according to the present invention includes a central processor (12) or a host unit, which includes memory means for storing data relating to advertisements and responses to the advertisements and which is connected to self-service terminals (18) at remote sites by a communicating means including a network server (16) and a network modem (14). Each self-service vending terminal includes a microprocessor (20), memory for storing advertisements (26), input means for inputting advertised information and for retrieving advertised information (22, 28). Each self-service vending terminal also includes a payment receiving means (32) for actuating the input means (22) upon receiving a predetermined payment. There are several different types of input means, including at least one of keyboard, voice recorder, video recorder, scanner, printer and digital camera.

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COMPUTERIZED DATA VENDING SYSTEM**FIELD OF THE INVENTION**

The present invention relates to a computerized data vending system, and in particular, to a self-service dating vending system comprising a network formed of a plurality of coin-operating vending machines which enable customers to create personal advertisements for advertising through the network and to respond to advertisements of other customers.

BACKGROUND OF THE INVENTION

Computerized public advertising came into existence several years ago. A person, who desires to place a personal advertisement available to the public usually sends it to a central facility where the advertisement is stored. The personal advertisements are usually communicated to the public by a printed list, which includes telephone voice mail numbers.

A personal advertisement may contain an appropriate description, personal profile, and/or audio.

After an advertisement has been published, interested parties reach the advertising party by placing, e.g., a 1-900 phone call or sending a letter to the publication in which the advertisement was placed.

Alternatively, personal advertisements can be placed in an appropriate electronic mail system. Public computer networks CompuServe and Prodigy represent

conventional electronic systems for placing personal advertisements. Participants in such systems usually pay a subscription fee.

Some of the drawbacks of such systems are that
5 they are not very efficient, rather expensive, and do not
lend themselves to complete automatization. Another
drawback is that they require an intermediary between the
interested parties. A further drawback is that they
provide for only voice and text communications, but do not
10 allow for image information.

Generally, computerized systems permitting
interaction between an advertiser and a customer are known.
An example of such a system is disclosed in U.S. Patent No.
5,283,731, which discloses a computer-based classified ad
15 system. The computerized ad system of the '731 Patent
comprises data processing means, including means for
creating an ad database comprising a plurality of ads.
Each ad contains data describing an item to be made
available through the system, such as a property offered
20 for sale or lease, available services employment, etc. The
data processing means further includes means for receiving
profile data describing an item sought from others through
the system, such as property desired for purchase or lease
or desired services or employment. Means are provided for
25 comparing the profile data to the ads in the ad database to
determine whether any of the ads match the profile and, if
so, for generating text output data comprising such
matching ads. The classified ad system also includes an
interactive voice response system comprising means for
30 storing words and/or phrases in voice form, means for
receiving the output data from the data processing means
and means for assembling a voice output message

corresponding to the output data from the stored words and/or phrases. In a preferred embodiment, interactive voice response system is coupled to a telephone network, so that the voice message can be delivered to a customer or
5 the like via a telephone network.

However, the computerized system described in the '731 Patent does not have provisions for creating an ad on the spot, e.g., upon payment of a prescribed fee, at a plurality of locations, or provisions for immediate access
10 and response to the stored ads from a plurality of locations for general public use.

Automatic systems which permit immediate access to stored data, upon payment of an appropriate fee, are also known. However, such systems have a very narrow
15 application, for, e.g., selling tickets to entertainment events. One such system is disclosed in U.S. Patent No. 5,239,480. The '480 Patent discloses a computerized ticket selling system, including a plurality of self-service
20 terminals for selecting and dispensing tickets. Each self-service terminal includes a central processor, including memory means, in which data concerning a plurality of events are stored and means for permitting a user to select one or more tickets for a predetermined event, means for receiving payment for selected tickets and means for
25 dispensing the selected tickets in response to payment. However, such a system does not permit a user to create data to be stored.

Accordingly, an object of the invention is a computerized dating vending system which would permit a
30 user to input necessary data of the user at any of a plurality of terminals located at a plurality of different

locations and to access data input at any of the plurality of terminals for general public use.

It is a further object of the invention to provide a computerized dating vending system which would permit a user to pay on the spot by cash or credit card when inputting and/or accessing data.

SUMMARY OF THE INVENTION

These and other objects of the invention, which will become apparent hereafter, are achieved by providing a computerized dating vending system comprising a plurality of self-service vending terminals, remote sites, which are connected with each other and which permit a customer or user to input, upon payment of an appropriate fee, a desired advertisement into any of the plurality of terminals and to review any of the advertisement which were placed in any of the terminals upon payment of the appropriate fee.

The computerized dating vending system according to the present invention, includes a central processor or a host unit, which includes memory means for storing data relating to advertisements and responses to the advertisements and which is connected with the self-service terminals or remote sites. Each self-service vending terminal includes a microprocessor and an associated video display device having a display screen, means for inputting advertisements and profiles, means for outputting the stored advertisements and profiles and means for receiving

payments. The system further includes means for communication of the separate self-service terminals with the central processor. The communicating means includes a network server and network modem connecting the central processor to the server.

A terminal or remote site may represent a kiosk type unit which is placed in public areas (convenience stores, bars, etc.) easily accessible to users. The users can be divided in two main groups: (1) those leaving an ad or profile, who will be referred to below as profilers, and those browsing existing ads/profiles, who will be referred to below as browsers. Upon browsing ads/profiles, a browser can print out those ads/profiles in which he/she is interested, and/or leave E-mail or voice messages for the profiler.

In order to place an advertisement, the profiler actuates the self-service terminal by inputting either cash or credit card payment into payment receiving means. After the vending machine is actuated, the profiler inputs the desired advertisement, which may include personal data, such as age, sex, physical data, religion and the like and/or a photo. The inputting means may be formed as keyboard for entering text, as voice input, photo-scanning device, digital camera and the like or can also be formed as a combination of different types inputting means. The entry data are stored in a respective terminal and are also transmitted to the central processor which, in turn, transmits the data to all other terminals of the system, thus, insuring access to the data from any of the network terminals.

Once an advertisement is placed in the vending machine, it is given an identification code. The advertisement will be stored for a set period of time. Browsers will be able to leave messages for these
5 advertisements in a form such as key entering text, scanning of photos, voice input, recording video, a photo taken, or by simply providing a code to the profiler in the terminal or placing a call to the profiler if the advertisement includes the profiler's phone number.

10 Once an ad or response to an ad is placed in the terminal, it is transmitted to other terminals, thus allowing for interactivity. This generally will be done by all of the terminals calling central processor via telephone lines and loading daily data in a preprogrammed
15 sequence. Once all the data has been updated in the central processor, it will call all the terminals in the network in a sequence, updating them with all of the daily inputted data collected from all of the terminals. This may generally take place once every twenty-four hours and
20 in the middle of the night. Another method would be to allocate a dedicated telephone line to each terminal, thus allowing for online updates.

Profiles may leave their phone numbers in the terminals. In this case, the terminals would allow the
25 browser to call the profiler through the machine and, at the same time, not disclose the phone number to the browser.

The terminals, as explained, may be placed in sport bars, night clubs, convenience stores, grocery
30 stores, video stores, or other suitable locations. Users of the terminals will be able to: (i) input personal

advertisements into the terminal; (ii) review personal advertisements of others at the terminals; and (iii) leave responses to personal advertisements in the vending machine or place a call through the vending machine to a profiler.

5 **BRIEF DESCRIPTION OF THE DRAWINGS**

The objects and features of the present invention will become more apparent and the invention will be best understood from the following Detailed Description of the Preferred Embodiment, when read with reference to the
10 accompanying drawings wherein:

Fig. 1 is a flow chart showing schematically a computerized dating vending system;

Fig. 2 is a flow chart showing schematically the composition of a self-service terminal of the computerized
15 dating vending system according to the present invention;

Fig. 3 is a flow chart showing step sequences which can be undertaken at a terminal or remote site; and

Fig. 4 is a flow chart showing information exchange between a terminal remote site and a central
20 computer host locale.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The computerized dating vending system 10 shown in Figure 1 comprises a central processor 12, including data storage means (not shown) and is connected by a network modem 14 and network server 16 to a plurality of self-service terminals 18. The central processor 12 may be a standard IBM compatible PC variety, driven by, e.g., Intel Chip 80486 or Pentium. The central processor should have a large storage capacity and be equipped with an expansion communication device capable to handle multiple dial-in calls simultaneously. As a communication device, a multi-port serial board or AT compatible single board PC processor boards can be used. The central processor 12 serves as an intermediary between the separate self-service terminals 18. Each terminal 18 comprises a microprocessor 20, for converting input information into storable data, and advertisement input means 22 for inputting the advertised data into the microprocessor 20. The microprocessor 20 includes an input 24 for receiving the input data, storage means 26 for storing the input data input at the terminal 18 and data received via the central processor 12, from other terminals, and an output-input means 28 for outputting data, received at the respective terminal to the central processor and for receiving data from the central processor. The microprocessor 20 may be similar to the central processor, a standard IBM compatible PC variety, but with a reduced storage capacity and without an expansion communication device.

The microprocessor 20 is associated with a video display 30 for displaying images of profiles, if available. The self-service terminal 18 further comprises a payment receiving device 32, which is connected to the input device

22 and actuates the same, upon receiving payment. The payment receiving device 32, if designed to accept credit cards, may be connected to a credit card payment authorized unit 34. The device 32 may include a standard bank credit
5 card reader. The input device 22, which may also include a voice recorder and which is associated with a photo-scanning or picture taking device 36, makes available to the user that least three options: (i) inputting an advertisement; (ii) to retrieving all of the
10 advertisements; and (iii) retrieving advertisement meeting the specified requirements of the user, such as age, sex, religion, and so forth. A digital camera can be used as a photo-scanning or picture taking device 36. The digital camera is an electronic photo-sensitive device which
15 records images and sends the digital images, in lieu of film, directly to a computer via a serial port interface.

The camera looks and acts similar to a standard camera in that it contains a viewer, lens, flash, and push-button to take pictures. The camera works by viewing an
20 image into its photo-sensitive cell, then building a matrix of pixel values (single points of color which appear on a computer monitor) in digital format (strings of 1's and 0's).

The main component of a digital camera, which
25 acts as the receptacle for light and images entering the lens, is the Charge Coupled Device, or CCD. The CCD works by storing the image information as an array of electrical charges, which is then measured by the camera and stored as a number.

30 The camera cannot only be used manually, like a standard camera, but can also be placed in a cradle which

is connected to a personal computer, then acted upon via software running on the PC. For example, the software could be designed to print a message on its monitor, saying "Smith, I will take a picture of you in three seconds,"
5 then signal the camera to take the picture, without any human interaction.

The image can be stored in various standard computer graphics formats, such as TIFF, PCX, BMP, etc. However, due to the large amount of storage required for
10 photographic digital images, the images are generally compressed using various software compression algorithms. A typical compressed color image is about 50K bytes in size. Thus, approximately 10,000 images can be stored on a 500 megabyte storage device (e.g. hard drive, optical
15 disk, magnetic tape, etc.).

Digital images, once stored in the computer can be output in various ways. One is to output the image directly on the computer's monitor (generally a color VGA or compatible device). This is done with one of a number
20 of graphic viewing software packages and programming (used to create custom applications).

Alternatively, an image can be output to a printer. Most laserjet or inkjet printers are capable of clear, grey-scale output of images (dot-matrix printers can
25 also be used, but with much less quality output). Also available are color printers, which use a number of color printing technologies, including thermal transfer, solid ink, liquid ink, dye diffusion, and color xerography.

Finally, images can also be output to film, using
30 instruments called phototypesetters and photoplotters.

Instead of the digital camera, a standard analog video camera may be used together with a video input board connected with the microprocessor. The video input board converts an analog video input to a digital format so that
5 single frames can be captured and stored in a standard graphic file format, e.g., TIFF, PCX, BMP.

The functioning of the system should be clear from the foregoing description, however, it would be briefly described for the sake of completeness. A
10 profiler, who wants to place an ad, actuates a self-service terminal 18 by inserting an appropriate payment into the payment receiving device 32, which actuates the input means 22. The input means 22 then displays the options available to the profiler. Upon selecting an option, the user inputs
15 the necessary information. If the option selected retrieval of the stored data, they are displayed on the video display 30 and/or printed out, and/or are voice-displayed. A detail description of using a terminal will now be described with reference to the flow chart shown in
20 Fig. 3.

A user, profiler or browser, begins by starting a program (box 1) and selecting, a option (box 5) on the main menu (box 4). The choices to the user are as follows: reviewing instructions (boxes 6, 10), browsing ads/leaving
25 messages (box 8), creating a personal ad (box 7), checking mail box (box 9). If the user selects the optional reviewing instructions, after the completion of their display (box 14), the main menu (box 4) is displayed again.

If the user selects the option of creating a
30 personal ad, a payment method screen (box 11) appears, requesting payment. After payment has been obtained, the

user (profiler) inputs various information, personal traits, interests, etc. (box 12), and has his picture taken (box 13). After the picture is taken, it is displayed on the screen for the user review. If the user does not like the photo, he/she can have it retaken.

Next, the user inputs (by voice) a personal message. After the user (profiler) inputs all required information, he/she is issued a mail box and a personal identification number (PIN) (box 15).

When the user selects the option of browsing the ads, after effecting payment (box 16), the user (browser) inputs parameters, traits, etc., of a person, he/she is interested in dating (box 17), and the terminal displays all profiles, which match the input (box 18). Then the browser can browse through each profile one at a time (boxes 20-21). If some data for a desired profile are stored in the central (host) computer and the browser requests their retrieval, the terminal dials the host computer for the requested data.

The browser, if he/she desires, can leave a message for a selected profile (box 22-23) and then continue browsing or exit (box 26).

When the user (profiler) selects the option of checking the mail box (box 9), the profiler can retrieve a message, if any, by either dialing a pre-determined phone number, with entering his/her mailbox code and PIN (boxes 27-29), or simply by visiting the terminal. If a message(s) is (are) present, it (they) will be retrieved for the profiler (boxes 30-32).

The flow chart shown in Fig. 4 illustrates exchange of information between terminals (remote site 7) and the central computer (host locale). The host computer (box 1) updates the information from all remote sites by dialing all remote cites in sequence. After receiving information from one remote cite (boxes 2-6), it dials another remote cite (boxes 7-10).

The self-service vending terminals were described as forming part of a centralized computerized vending system. However, it should be apparent that a self-service vending terminal can be self-contained, and not be connected with the central processor. In this case, the browser will have access only to personal ads which were input in a particular terminal he/she is using.

The present invention was described with reference to placing and retrieval of personal advertisements. However, the system according to the invention may be used for many other forms of advertisements such as help-wanted ads, automobile and/or real estate ads, and other types of classified ads.

Though the present information was shown and described with reference to a preferred embodiment, many modifications thereof will be apparent to those skilled in the art and, therefore, it is not intended that the present invention be limited to the disclosed embodiment and/or details thereof, and departures be made therefrom within the spirit and scope of the appended claims.

WHAT IS CLAIMED IS:

1. A computerized data vending system, comprising:

5 a plurality of self-service vending terminals for inputting advertised information and for retrieving stored advertised information;

10 a central processor connected with said plurality of self-service vending terminals for receiving the input information and for distributing advertised information received from any one of said plurality of self-service vending terminals to all other self-service vending terminals; and

15 means for connecting said plurality of said self-service vending terminals with said central processor, said connecting means including a network server connected to each of said plurality of said-service vending terminals, and a network modem connecting said network server with said central processor;

20 wherein each of said self-service vending terminal comprises means for storing advertisements, input means for inputting the advertized information and for retrieving advertised information stored in said storing means, and payment receiving means connected to said input means for actuating the same upon receiving a predetermined payment.

25 2. A self-service vending terminal for use in a computerized data vending system, comprising:

a microprocessor including means for storing data and output-input means, connectable with a central

processor of the system, for outputting information thereto and inputting information therefrom;

display means associated with said microprocessor for displaying information stored in said storing means;

5 input means for inputting information to said microprocessor; and

 payment receiving means connected with said input means for actuating the same upon receiving a predetermined payment.

10 3. The self-service vending terminal of claim 2, wherein said input means comprises at least one of keyboard, voice recorder, video recorder, scanner, printer and digital camera.

15 4. A method of creating an advertisement by a user for browsing by another user, said method comprising the steps of:

 providing a computerized data vending system including a plurality of self-service vending terminals, a central processor, and means for connecting the self-
20 service vending terminals with the central processor;

 inputting an advertisement in at least one of the plurality of self-service vending terminals;

 transmitting the advertisement to the central processor and from the central processor to at least one
25 other terminal of the plurality of self-service vending terminals;

assessing to an advertisement information, which is stored in any of the plurality of self-service vending terminals and the central processor from any of the plurality of self-service vending units; and

5 leaving a message in response to a retrieved advertisement information at any of the plurality of self-service vending terminals, the message being accessible at any of the plurality of self-service vending terminals.

5. A self-contained self-service vending terminal,
10 comprising:

a microprocessor including means for storing advertized information;

display means associated with said microprocessor for displaying the advertized information stored in said
15 storing means;

input means for inputting the advertising information into said storing means for inputting data necessary for retrieval of the stored advertisement information; and

20 payment receiving means connected with said input means for actuating the same upon receiving a predetermined payment.

6. The self-contained self-service terminal of claim 5, wherein said input means comprises at least one of
25 keyboard, voice recorder, video recorder, scanner, printer, and digital camera.

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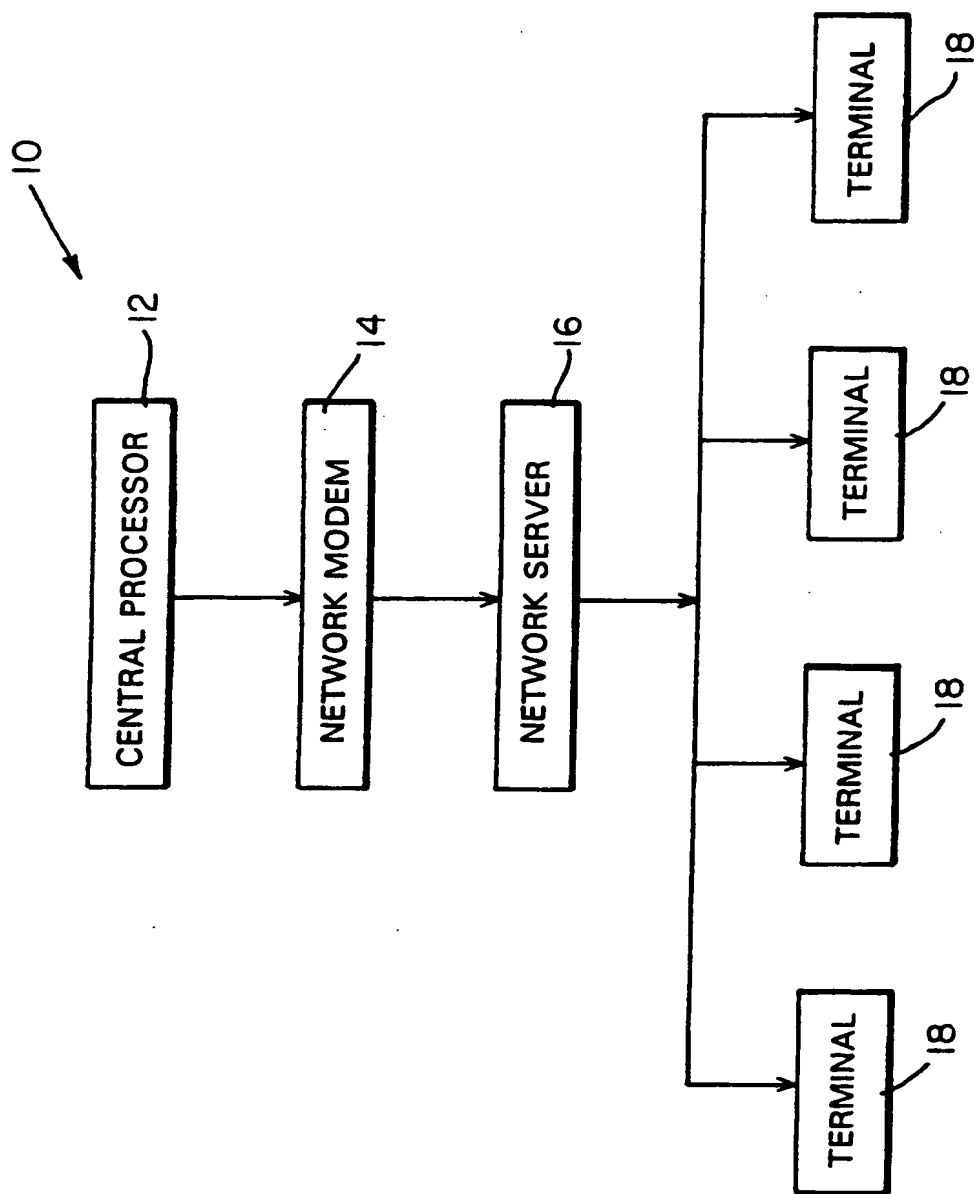


FIG. 1

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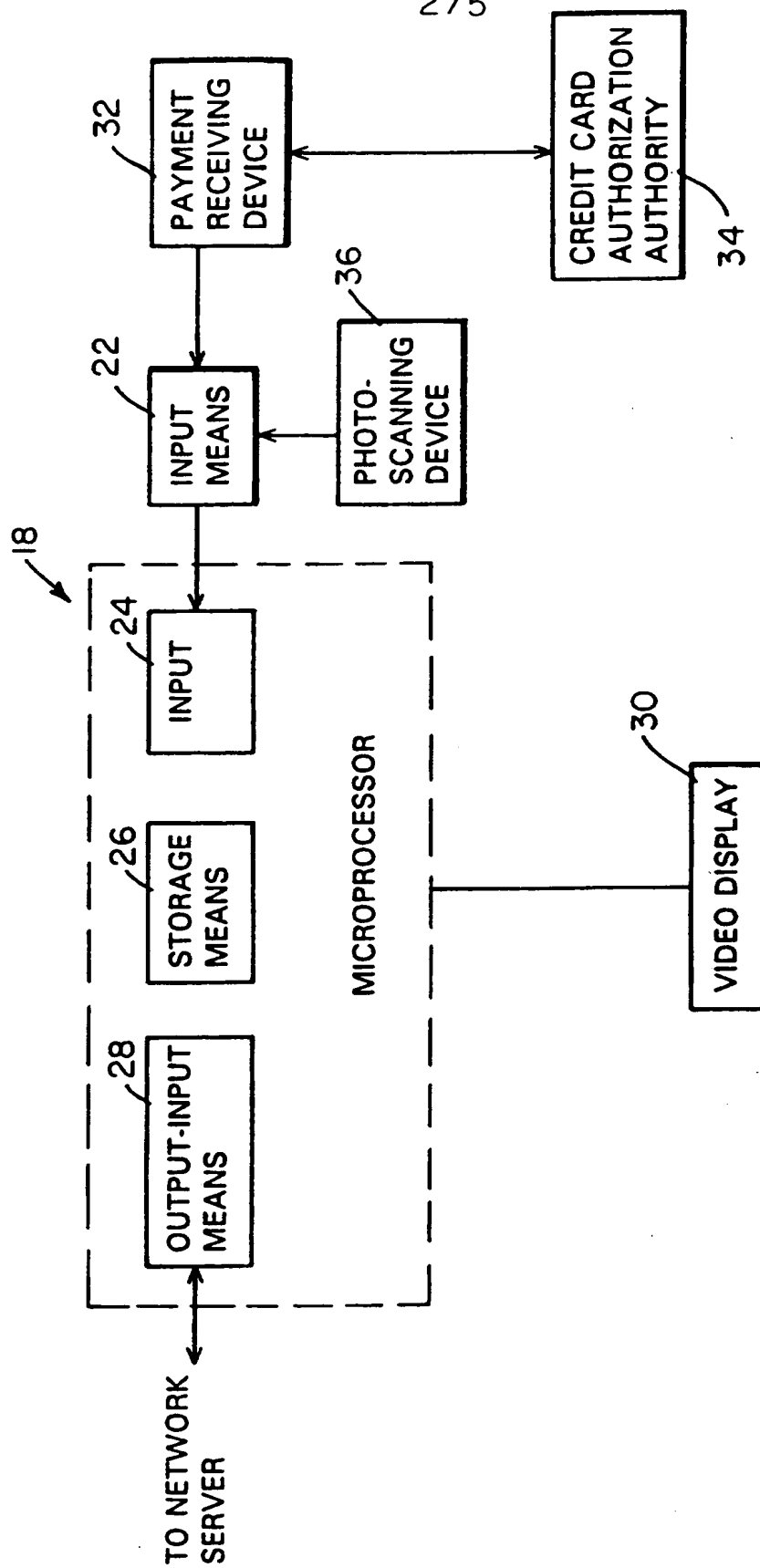
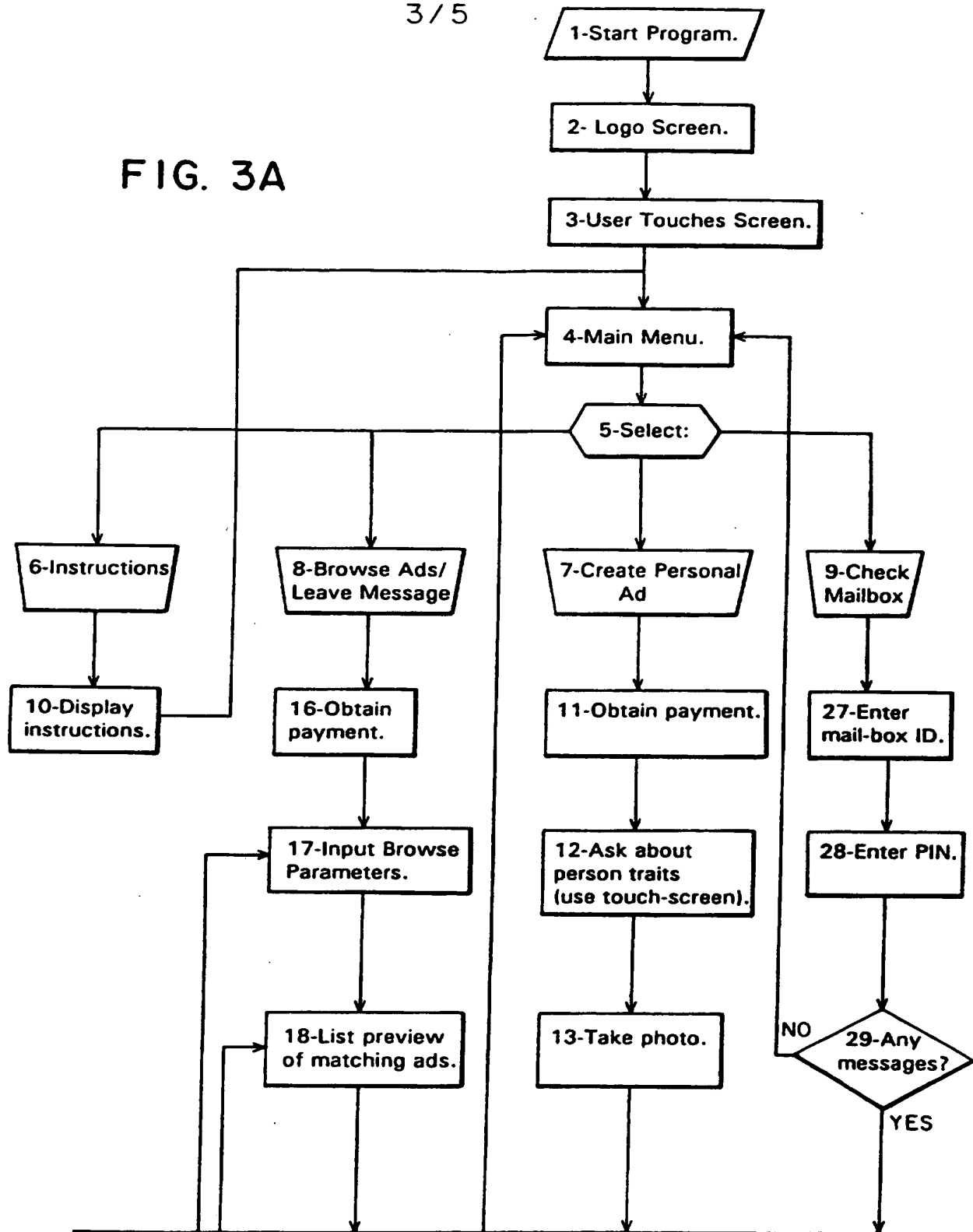


FIG. 2

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FIG. 3A



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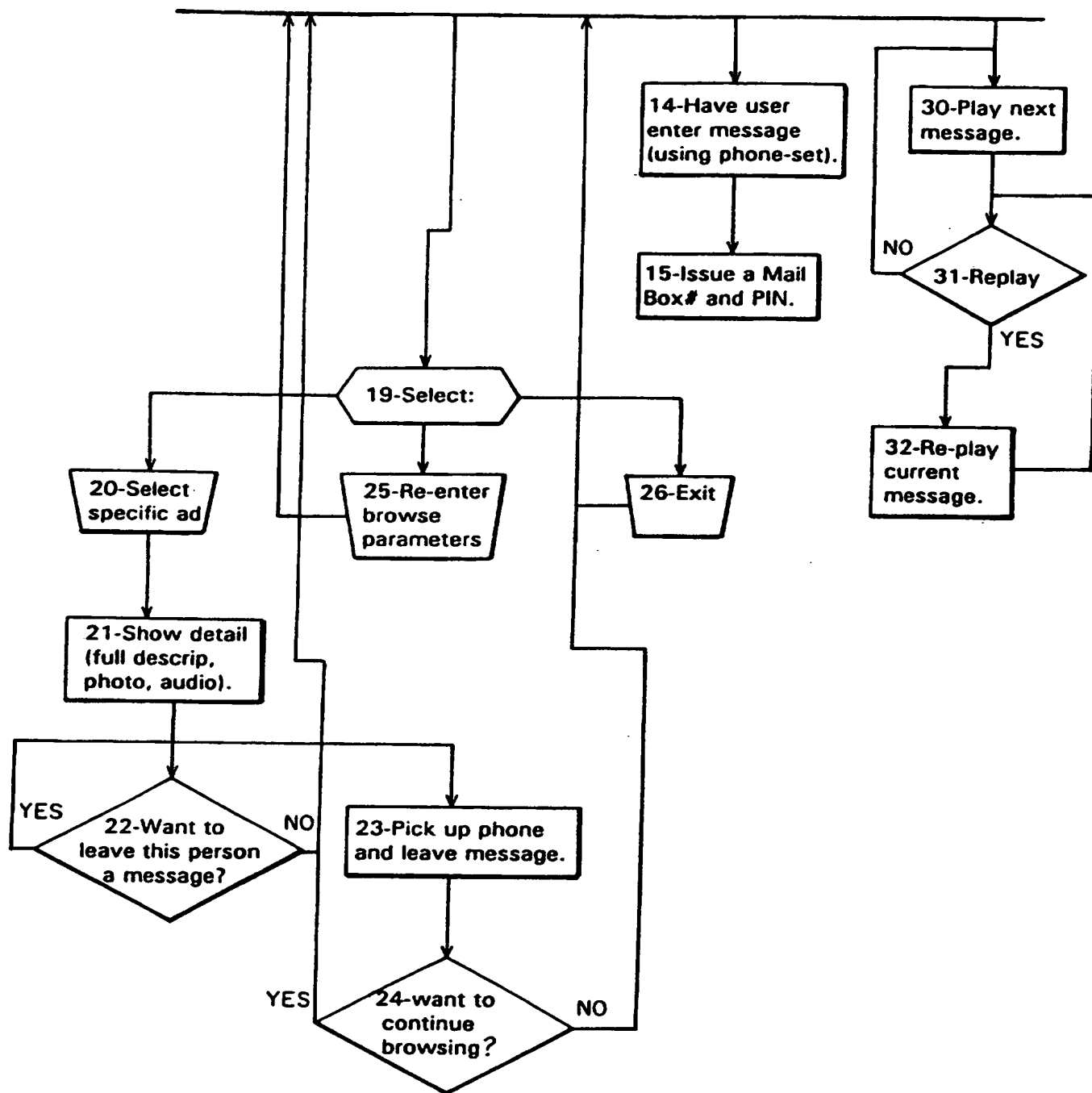


FIG. 3B

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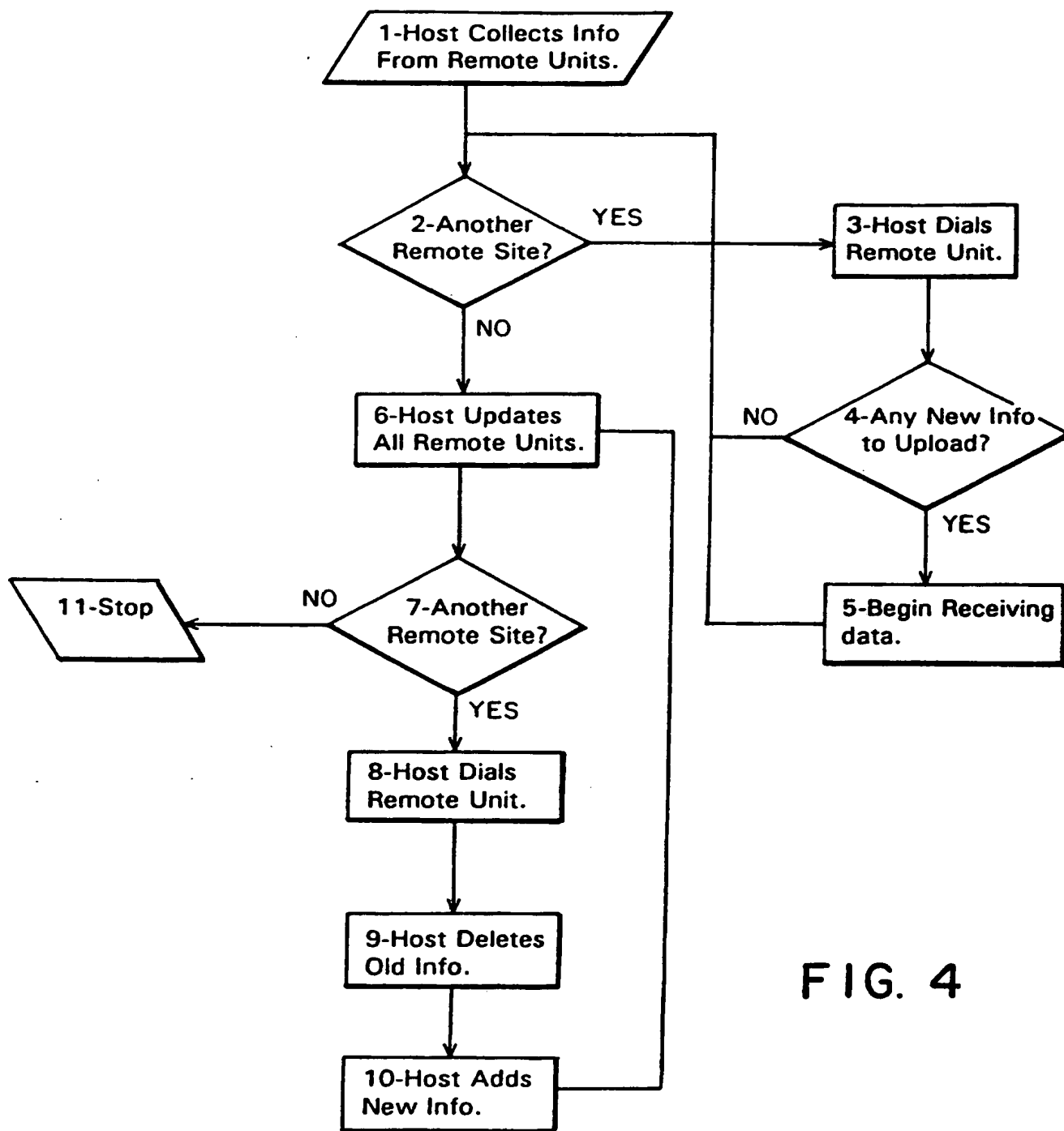


FIG. 4

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : G06F 17/60

US CL : 364/401

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 364/401, 408;235/379,380,381,383;340/825.35

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

APS, DIALOG

search terms: date or dating, ads, advertising, matching or compatible, computerized or automated

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
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Further documents are listed in the continuation of Box C.



See patent family annex.

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Date of the actual completion of the international search

15 OCTOBER 1995

Date of mailing of the international search report

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Telephone No. (703) 305-3800

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US95/09644

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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